



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/620,888	07/21/2000	Steven T. Barham	528-008605-US (PAR)	4779
2512	7590	08/22/2005	EXAMINER	
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			PHU, PHUONG M	
			ART UNIT	PAPER NUMBER
			2631	

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/620,888

Applicant(s)

BARHAM ET AL.

Examiner

Phuong Phu

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-7,11,13,14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-7,11,13,14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is responsive to the Applicant's Response filed on 6/23/05.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 2, 4, 5, 6, 7, 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Ito (6,542,471), newly-cited.

-Regarding to claim 1, see figures 1, 3, 4 and 5, and col. 6, line 14 to col. 7, line 67, col. 9, line 4 to col. 14, line 31, Ito discloses a method wherein the method (see figure 1) comprises:

step (62) of acquiring a signal (REQUEST FOR CHANGE OF DATA COMMUNICATION TO HIGH SPEED) (see (S20) of figure 3) from a first transceiver (1) at a second transceiver (50);

step (58) of correlating the signal with a first code sequence having a first code rate;

Art Unit: 2631

step (56) of transmitting, in response to the correlating the signal with said first code sequence, an acknowledgement (DATA COMMUNICATION SPEED CHANGE REQUEST RESPONSE SIGNAL) (see (S24) of figure 3) from said second transceiver to said first transceiver; and

step (5, 15, 54, 64) of changing, at said first and second transceiver, in response to the correlating the signal with the first code sequence, to a second code sequence having a second code rate that is higher than said first code rate (see figure 5, and col. 12, line 35 to col. 14, line 31).

-Regarding to claim 2, Ito discloses that the first and second code sequences comprises PN code sequence (see PN CODE 11 AND PN CODE 12 of figure 5).

-Regarding to claim 4, Ito discloses (see figure 1):

step (58, 66, 68, 72) of tracking the first code sequence in the receiver of the second transceiver;

step (54) of changing the first code sequence of a first code generator of the transmitter of the second transceiver to the second code sequence; and

step (64) of changing the first code sequence of a second code generator of the receiver of the second transceiver to the second sequence.

-Regarding to claim 5, Ito discloses that changing the first code sequence to the second code sequence in said first and second transceivers is in response to the occurrence of a predetermined event (T4) (see figure 5).

-Regarding to claim 6, see figures 1, 3, 4 and 5, and col. 6, line 14 to col. 7, line 67, col. 9, line 4 to col. 14, line 31, Ito discloses a system wherein the system (see figure 1) comprises:

Art Unit: 2631

a first transceiver (3, 7, 9, 13, 11);

a first multi-rate code generator (5) connected to the first transceiver for generating a first coded signal having a first code rate;

a second transceiver (56, 52, 62, 58) responsive to the first transceiver for receiving said first coded signal at said first code rate;

control circuits (66, 70, 68, 72) for changing, at said first and second transceivers, to a second code sequence having a second code rate is higher than said first code rate.

-Claim 7 is rejected with similar reasons set forth for claim 2.

-Regarding to claim 11, Ito discloses that the first and second multi-rate code generators comprise dual rate code generators for generating codes PN CODE 11 AND PN CODE 12 (see figure 5).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13, 14, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito.

-Regarding to claim 13, see figures 1, 3, 4 and 5, and col. 6, line 14 to col. 7, line 67, col. 9, line 4 to col. 14, line 31, Ito discloses a method wherein the method (see figure 1) comprises:

step (3, 7, 9) of transmitting a first coded signal having a first code rate from a transmitter system;

step (62, 58) of receiving the first coded signal on a receiver system; and

step (58, 70) of calculating a probability of detection of the first coded signal.

Ito does not disclose step of changing the first coded signal to a second coded signal having a second code rate that is higher than said first rate, in response to the probability of detection of the first coded signal exceeding a predetermined amount.

However, Ito discloses that the calculated probability of detection of the first coded signal is an error occurrence rate, and Ito discloses step of changing the first coded signal to a second coded signal having a second code rate that is higher than said first rate, in response to the probability of detection of the first coded signal lower than a first predetermined amount (see col. 9, line 63 to col. 10, line 25).

On the other hand, it is well-recognized in the art that signal to noise ratio (SNR) of a received signal being received at a receiver is also a value indicating the detection of the received signal at the receiver; and the examiner takes Official Notice, wherein the SNR has an inverted relationship with an error occurrence rate (e.g., BER) which indicates the detection of the received signal at the receiver.

It would have been obvious for one skilled in the art, when building or carrying out Ito invention, within his skills and upon his design preference without affecting the overall system performance, to implement Ito in an alternative, equivalent way that the calculated probability of detection of the first coded signal is SNR, and that the step of changing the first coded signal to a second coded signal having a second code rate higher than said first rate is in response to SNR higher than a second predetermined amount (which would have an inverted relationship with said first predetermined amount).

-Claim 14 is rejected with similar reasons set forth for claim 2.

Art Unit: 2631

-Regarding to claim 16, Ito discloses (see figures 1 and 5):

step (66, 68) (see figure 1) of waiting a predetermined amount of time (e.g., $T_3 - T_1$) (see figure 5);

step (66, 68) of changing a first PN code of the receiver system to a second PN code after the predetermined amount of time has elapsed; and

step (66, 68) of changing a second PN code of the transmitter system to a second PN code after the predetermined amount of time has elapsed.

-Regarding to claim 17, Ito discloses that the changing of the first and second codes occurs contemporaneously (see figure 5).

-Claim 18 is rejected with similar reasons set forth for claim 13.

Response to Arguments

5. Applicant's arguments with respect to claims 1, 2, 4-7, 11, 13, 14 and 16-18 have been considered but are moot in view of the new ground(s) of rejection.

The previous objection to the Drawings has been withdrawn since the Drawings were amended to overcome the objection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (6:30-2:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2631

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuong Phu

Phuong Phu
08/16/05

**PHUONG PHU
PRIMARY EXAMINER**

Phuong Phu
Primary Examiner
Art Unit 2631